

ABSTRACT

A semiconductor laser diode capable of achieving an improvement in kink level and an improvement in catastrophic optical damage (COD) level. The semiconductor laser diode includes a first-conductivity type semiconductor substrate, a first-conductivity type clad layer formed over the substrate, an active layer formed over the first-conductivity type clad layer, a second-conductivity type clad layer formed over the active layer, and provided with a ridge, and a light confining layer formed on the second-conductivity type clad layer, and made of a first-conductivity type semiconductor material, the light confining layer including higher-order mode absorption layers having an energy band gap lower than optical energy produced in the active layer, and refractive index control layers having a refractive index lower than that of the higher-order mode absorption layers. The higher-order mode absorption layers and refractive index control layers are laminated in an alternate manner.